Lighting: Lighting Power Allowances –Complete Building Method

Description
This change will add space types to the complete building table (Table 1-M) and update some of the allowed Watts for some currently listed space types.

Benefits
This change may include parking garages as part of the lighting power allowances. A savings of 10% is likely for a number of existing applications. New standard non-conditioned spaces like garages have benefits expected to include at least 10% energy savings.

Environmental Impact
There is no negative environmental impact.

Type of Change
This would be a modification to existing prescriptive requirements. Changes would be made to Table 1-M.

Measure Availability and Cost
This will require research. It is generally believed that parking for garages tends to be relatively efficient already, but canopy lighting standards will probably reduce cost by imposing LPD limits.

Useful Life, Persistence and Maintenance
No significant change to current practices.

Performance Verification
There are no added requirements for performance verification.

Cost Effectiveness
The requirements will be shown to be cost effective using lighting models developed in subsequent tasks.

Analysis Tools
No additional analysis tools are needed. Point-by-point lighting calculations will be used in developing the models that are the basis of the LPD criteria. These methods may include LumenMicro, Radiance and/or LightScape.

Relationship to Other Measures

Adjustments to the whole building lighting power allowances will need to be consistent to the area category allowances and the tailored method.

Bibliography and Other Research
The *Advanced Lighting Guidelines* models demonstrate significant potential reductions in canopy lighting power, if proper lighting methods are employed. Other values would be based on models updated for 90 LPW fluorescent general lighting.
LPD values from 90.1-1999, LPD models as contained in the IESNA technical papers from the 90.1 committee, and modeling by CEC Staff and others will be needed to ensure that the LPD values are reasonable.